

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of transmitting signals from at least two first antennae to at least one second antenna comprising the steps of:

determining at least one first coefficient based upon information indicative of at least two first signals received by the at least two first antennae, said at least one first coefficient being indicative of at least one correlation between the first signals, said at least two first signals being transmitted from said at least one second antenna; and

determining at least one second coefficient based on the first coefficient, said at least one second coefficient indicating weights applied to at least two second signals to be transmitted by said at least two first antennae, the weights indicating relative amounts of orthogonal coding and beamforming to be used for transmitting said at least two second signals.

2. (Currently Amended) The method of claim 1, wherein the step of determining at least one correlation coefficient between the received signals comprises determining at least one amplitude correlation coefficient based on at least one pilot signal transmitted by said at least one second antenna.

3. (Currently Amended) The method of claim 1, wherein the step of determining at least one first coefficient comprises determining at least one phase correlation coefficient based on at least one pilot signal transmitted by said at least one second antenna.

4. (Previously Presented) The method of claim 3, wherein the at least one phase correlation coefficient is estimated.

5. (Currently Amended) The method of claim 1, wherein the step of determining at least one first coefficient comprises determining at least one correlation between the received signals based on at least one pilot signal transmitted by said at least one second antenna.

6. (Previously Presented) The method of claim 1, wherein the step of determining said at least one second coefficient based on the first coefficient comprises selecting a proportion of orthogonal coding relative to a proportion of beamforming used for transmitting the signals.

7. (Previously Presented) The method of claim 6, wherein the at least one first coefficient varies between a first level and a second level.

8. (Previously Presented) The method of claim 13, wherein the at least one first coefficient having a level between the first and second levels results in selecting both beamforming and orthogonal coding for transmitting.

9. (Previously Presented) The method of claim 13, wherein the at least one first coefficient determines the proportion of beamforming relative to orthogonal coding used for transmitting.

10. (Previously Presented) The method of claim 9, wherein the at least one first coefficient being at a level that is closer to the first level results in transmitting more beamforming than orthogonal coding.

11. (Previously Presented) The method of claim 9, wherein the at least one first coefficient being at a level that is closer to the second level results in transmitting using more orthogonal than beamforming.

12. (Previously Presented) The method of claim 9, wherein the at least one first coefficient relative to the first and second reference levels determines the relative amounts of beamforming relative to orthogonal coding used for transmitting.

13. (Previously Presented) The method of claim 7, wherein the at least one first coefficient being substantially equal to the first level results in selecting beamforming for transmitting and wherein the at least one correlation coefficient being substantially equal to the second level results in selecting orthogonal coding for transmitting.